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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/423,806	03/17/2000	AKIHIKO IBATA	MEIC:070	7172

7590 06/10/2003

PARKHURST & WENDEL
1421 PRINCE STREET
SUITE 210
ALEXANDRIA, VA 22314-2805

EXAMINER

POKER, JENNIFER A

ART UNIT PAPER NUMBER

2832

DATE MAILED: 06/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/423,806

Applicant(s)

IBATA ET AL.

Examiner

Jennifer A. Poker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Prosecution Application

1. The request filed on May 9, 2003 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/423,806 filed on November 12, 1999 is acceptable and a CPA has been established. An action on the CPA follows. Claims 1-21 of the pending application are being examined in their entirety.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,027,008 to Toi, et al, in view of U.S. Patent Number 5,197,170 to Senda, et al.

Regarding claims 1, 5, 6 Toi, et al, discloses an electronic device comprising:

(1) a helical coil conductor, having two ends, formed about the surface of a main portion of a ceramic core (figure 1b; column 5, lines 29-35);

(2) terminal electrode layers formed on both external ends of the core (figure 1b; column 5, lines 29-35);

(3) ends of the helical conductor being connected to the electrode layers (figure 1b; column 5, lines 29-35);

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Toi, et al, discloses the claimed invention except for the substrate being a capacitor element formed of insulation and electrode layers.

Senda, et al, discloses An LC composite network comprising a substrate having a capacitor section including a capacitor network formed by alternately laminating a ceramic layer and a capacitor electrode layer; forming a coil section having a coil network including a plurality of spiral coil patterns on the sintered substrate; dividing the laminated substrate having the capacitor section and the coil section into LC composite network parts; and connecting the capacitor electrode with the spiral coil pattern by electrical connection means in each of the LC composite network parts (abstract) (column 1, lines 50-57).

One skilled in the art at the time the invention was made would have found it obvious to combine the teachings of Toi, et al, with the teachings of Senda, et al, and incorporated a multi-layered substrate/capacitor unit having laminated insulated sheets so that the part produced in the method can be applied to a circuit having a narrower pattern pitch and so that the LC composite component may be mounted in smaller spaces (abstract) (column 1, lines 50-57).

Regarding claim 2, Toi, et al, further discloses the insulated electric conductive wire being comprised of copper and the multi-layered electrodes comprising a Ni-plated layer disposed on a base layer. Instead of Ni, however, Cu or Fe may also be used for the same purpose. By utilizing Cu for a layer on the electrodes would, the wire and electrodes would be made of the same material (columns 7 & 8, lines 64-67 & 1-6). Furthermore, applicant admits on page 12 of the specification that the conductor/wire and the electrode layers may be made of any material so long as it is a good electrical conductor. In addition, It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the most suitable materials, since it has been held to be

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within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 3, Toi, illustrates in figure 1A that the helical conductor's axis is parallel with the electrode layers.

Regarding claim 4, Senda, et al, states that the LC composite part comprises a plurality of laminated capacitors (Column 3, lines 48-55). This structure would be beneficial for the purposes of storing more energy.

Regarding claims 7 and 8, Toi, et al, further discloses that the electronic device may include a dielectric core or an insulated core made of ceramics or resin may also be used (column 11, lines 23-30).

Regarding claim 9, conductive paste is applied to the surface to form the electrodes (column 4, lines 30-38)

Regarding claims 10 and 20, Toi, et al, discloses an electronic device comprising:

(1) a helical coil conductor, having an insulated coating, and being formed about the surface of a main portion of a ceramic core (either a dielectric core or an insulated core made of ceramics or resin may be used) (figure 1b; column 5, lines 29-35; column 11, lines 23-30).

(2) terminal electrode layers formed on both external ends of the core (figure 1b; column 5, lines 29-35);

(3) ends of the helical conductor being connected to the electrode layers (figure 1b; column 5, lines 29-35);

(4) the helical axis being parallel with the electrode layers (figure 1A).

Toi, et al, discloses the claimed invention except for the core being a capacitor element formed of insulation and electrode layers.

Senda, et al, discloses an LC composite network comprising a substrate having a capacitor section including a capacitor network formed by alternately laminating a ceramic layer and a capacitor electrode layer; forming a coil section having a coil network including a plurality of spiral coil patterns on the sintered substrate; dividing the laminated substrate having the capacitor section and the coil section into LC composite network parts; and connecting the capacitor electrode with the spiral coil pattern by electrical connection means in each of the LC composite network parts (abstract) (column 1, lines 50-57).

One skilled in the art at the time the invention was made would have found it obvious to combine the teachings of Toi, et al, with the teachings of Senda, et al, and incorporated a multi-layered substrate/capacitor unit having laminated insulated sheets so that the part produced in the method can be applied to a circuit having a narrower pattern pitch and so that the LC composite component may be mounted in smaller spaces (abstract) (column 1, lines 50-57).

Regarding claim 20, Toi, et al, further discloses that the electrodes comprise Nickel, Copper or Iron, which are all magnetic material. This makes the electrodes magnetic bodies of the composite component (columns 7 & 8, lines 64-67 & 1-6).

Claims 11-19 and 21 are the method counterparts to product claims 1-10 and 20, and steps, as such, are inherent for fabricating a electronic component comprising a capacitor with a plurality of insulation layers, conductive layers, and external electrodes.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Poker whose telephone number is 703-305-4037. The examiner can normally be reached on 6:00-3:30, Mon.-Fri. (alternating Fridays off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on 703-308-7619. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

jap
June 3, 2003


ELVIN ENAD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800
6/3/03